

LAROUSSE

Dictionary of
SCIENCE
and
TECHNOLOGY

General Editor

Professor Peter M B Walker, CBE, FRSE



The subjects are computing, telecommunications, engineering, science, and mathematics. There are several illustrations and diagrams to help conceptualize the elements of each

Printed in Great Britain by Clays Ltd, St Ives plc

used for eg buoyancy, shock absorption, cushioning, thermal insulation and, in sandwich panels, for enhanced flexural rigidity with small weight penalty. See **reticulated foam**.

backed fabric (Textiles) Dress and furnishing fabrics bonded on the back to polyether or polyester foams by adhesive or flame treatment.

foamed plastics (Plastics) See **expanded plastics**.

foamed slag (Build) Blast furnace slag aerated while still molten. Used for building blocks and for acoustic and thermal insulation.

foam moulding (Eng) Any polymer process which gives a partly or fully foamed product, esp **structural foam moulding**, **sandwich moulding**.

foam plug (MinExt) Mass of foam generated and blown into underground workings to seal off a fire or keep out oxygen, where a fire risk exists.

foam separation (Chem) Removal of solutes or ions from a liquid by bubbling air through in the presence of surface active agents which tend to be adsorbed on to the bubbles. Cf **froth flotation**, for larger particles.

focal length (Phys) For a lens, the distance measured along the principal axis, between the principal focus and the second principal point. In a thin lens both principal points may be taken to coincide with the centre of the lens. See **back focus**, **convention of signs**, **equivalent focal length**.

focal plane (ImageTech; Phys) The plane, at right angles to the principal axis of a lens or lens system, in which the image of a particular object is formed. The principal focal plane passes through the principal focus, and contains the images of objects at infinity. It is the normal position of a film or plate, a ground glass focusing screen or a pick-up device.

focal plane shutter (ImageTech) Camera shutter in the form of a blind with a slot, which is pulled rapidly across, and as close as practicable to, the film or plate, exposure time being varied by adjusting the width of the slot. Called **self capping** because the slot is closed during extension.

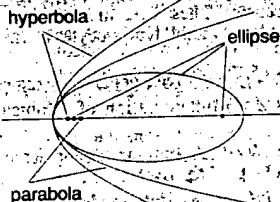
focal point (Phys) The focal spot formed on the axis of a lens or curved mirror by a parallel beam of incident radiation. In its general form, this definition includes acoustic lenses, electron lenses, and lenses or mirrors designed for use with radio waves, infrared or ultraviolet radiation.

focal spot (Phys) A spot onto which a beam of light or charged particles converges. See **X-ray focal spot**.

focimeter (Phys) An instrument for measuring the focal length of a lens.

foid (Geol) See **earthquake**.

foci (Maths) Of a conic, a point such that the two lines of every pair of conjugate lines through it, are mutually perpendicular. The ellipse and hyperbola each have two real and two imaginary foci, and the parabola has one real focus. See **conic** for alternative definition. Of a quadric, a point not on the quadric, such that the three planes of every set of three mutually conjugate planes through it are mutually perpendicular.



focus. Indicated with the appropriate curve.

focus (Phys) A point to which rays converge after having passed through an optical system, or a point from which such rays appear to diverge. In the first case the focus is

said to be *real*; in the second case, *virtual*. The *principal focus* is the focus for a beam of light rays parallel to the principal axis of a lens or spherical mirror.

focusing (ImageTech) Adjustment of the axial position of a camera lens to form a sharp image in the required plane, such as the film or plate in photography or the camera tube target in TV.

focusing (Phys) The convergence to a point of: (1) beams of electromagnetic radiation; (2) charged particle beams; or (3) sound or ultrasonic beams.

focusing coil, focusing electrode (ElecEng) One used to focus a charged particle beam by a magnetic or electrostatic field.

focusing screen (ImageTech) Screen, usually of ground glass, located in the place of a film or plate, or on the top of a reflex camera, for adjusting the focusing of the lens before exposure.

focus skin distance (Radiol) The distance from the focus of an X-ray tube to the surface of incidence on a patient, usually measured along the beam axis. Abbrev **FSD**.

foetal membranes (Zool) In reptiles, birds and mammals, outgrowths from the embryo, or the extraembryonic tissue, which surround and protect the foetus and facilitate respiration. See **allantois**, **amnion**, **chorion**.

foetus (Zool) A young mammal within the uterus of the mother, or in oviparous animals the young within the egg, from the beginning of organ development until birth. Adj **foetal**.

fog (ImageTech) An overall density in a photographic record not related to the exposed image. It may be caused by an unwanted exposure to light or radiations such as X-rays, by incorrect chemical processing or by protracted and unsuitable storage.

fog (Meteor) Minute water droplets with radii in the range one to 10 μm suspended in the atmosphere and reducing visibility to below 1 km (1100 yd in UK).

fogbow (Meteor) A bow seen opposite the Sun in fog. The bow is similar to the rainbow, but the colours are faint, or even absent, owing to the smallness of the drops, which causes diffraction scattering of the light.

fog fever (Vet) *Atypical interstitial pneumonia*. An acute respiratory distress syndrome of cattle which usually comes on within two weeks of introduction to lush pasture. Most common in suckler herds where morbidity may reach 50%.

fog levels (ImageTech) The minimum density of a processed photographic image in an unexposed area.

fog signal (CivEng) A detonating cap which is placed on a rail before the passage of a train, so that the detonation occurring, when a wheel passes over it shall serve as a signal to the driver in bad visibility.

fog-type insulator (ElecEng) A type of overhead-line insulator having long leakage distances, specially designed for areas in which fog is prevalent.

föhn wind (Meteor) A warm dry wind which blows to the lee of a mountain range. It is prevalent on the northern slopes of the Alps.

foid (Min) A term meaning feldspathoid used by international agreement on rock classification.

foidite (Min) Internationally ('IUGS') agreed usage for volcanic rocks containing more than 60% feldspathoids ('foid') by volume among light-coloured constituents. The most abundant feldspathoid name should be used if possible, eg nepheline, leucite etc. See **volcanic rocks**.

foidolite (Min) Internationally ('IUGS') agreed usage for plutonic rocks containing more than 60% feldspathoids ('foid') by volume among light-coloured constituents. The most abundant feldspathoid name should be used if possible, eg nepheline, leucite etc. See **plutonic rocks**.

FOIRL (Comp) Abbrev for fibre optic inter-repeater link.

foldback DNA (Biol) Sequence complementarity, which allows a single-stranded molecule to form secondary structure. Hairpin DNA is one form with a minimal loop at its end.

folded dipole (Telecomm) A dipole antenna with a

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

☒ **BLACK BORDERS**

☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**

☐ **FADED TEXT OR DRAWING**

☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**

☐ **SKEWED/SLANTED IMAGES**

☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**

☐ **GRAY SCALE DOCUMENTS**

☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**

☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**

☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.